

DOE Office of Science Early Career Research Program

"Real Time TEM Imaging of Materials Transformations in Liquid and Gas Environments"

PI: Haimei Zheng

A. Publications intellectually led by this FWP from 1 Oct 2013 – 1 Oct 2014:

1. "Facet development during platinum nanocube growth", H. G. Liao, D. Zhrebetskyy, H. Xin, C. Czarnik, **P. Ercius**, H. Elmlund, M. Pan, **L -W. Wang**, **H. Zheng**, *Science*, vol. 345, p. 916, **2014**. DOI: 10.1126/science.1253149.
2. "Revealing the atomic restructuring of Pt-Co nanoparticles", H. L. Xin, S. Alayoglu, R. Tao, A. Genc, C. Wang, L. Kovarik, E. Stach, **L -W. Wang**, **M. Salmeron**, **G. Somorjai**, **H. Zheng**, *Nano Lett.* vol. 14(6), p. 3203, **2014**. DOI: 10.1021/nl500553a.
3. "Nanostructured flexible Mg-modified LiMnPO₄ matrix as high-rate cathode materials for Li-ion batteries", Q. Lu, G. S. Hutchings, Y. Zhou, H. L. Xin, **H. Zheng**, F. Jiao, *Journal of Materials Chemistry A* vol. 2, p. 6368-6373, **2014**. DOI: 10.1039/C4TA00654B.
4. "Visualization of the coalescence of Bi nanoparticles", K. Niu, H. G. Liao, **H. Zheng**, *Microsc. Microanal.*, vol. 20(2), p. 416-24, **2014**. DOI: 10.1017/S1431927614000282 (2014).
5. "Visualization of electrode-electrolyte interfaces in LiPF₆/EC/DEC electrolyte for lithium ion batteries via in-situ TEM", Z. Zeng, W. Liang, H. G. Liao, H. L. Xin, Y. H. Chu, **H. Zheng**, *Nano Lett.*, vol. 14(4), p. 1745-1750, **2014**. DOI: 10.1021/nl403922u.
6. "Structural and morphological evolution of lead dendrites during electrochemical migration", M. Sun, H. Liao⁺, K. Niu, **H. Zheng**, *Scientific Reports*, vol. 3(3227), **2013**. DOI:10.1038/srep03227.

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7. "Observation of growth of metal nanoparticles", H. G. Liao, K. Niu, **H. Zheng**, *Chem. Comm.*, vol. 49, p. 11720-11727, **2013**. DOI: 10.1039/C3CC47473A.

8. "Revealing bismuth oxide hollow nanoparticle formation by the Kirkendall effect", K. Niu, J. Park, [H. Zheng](#), [A. P. Alivisatos](#), *Nano Lett.*, vol. 13(11), p. 5715-5719, **2013**. DOI: 10.1021/nl4035362.
9. "In situ TEM study of catalytic nanoparticle reactions in atmospheric pressure gas environment", H. L. Xin, K. Niu, D. H. Alsem, [H. Zheng](#), *Microsc. Microanal.* vol. 19(6), p. 1558-68, **2013**. DOI: 10.1017/S1431927613013433.